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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,975	06/15/2006	Eric Jervis	92132-10	8208

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EXAMINER

KETTER, JAMES S

ART UNIT	PAPER NUMBER
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1636

MAIL DATE	DELIVERY MODE
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04/12/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,975	Applicant(s) JERVIS ET AL.	
	Examiner James S. Ketter	Art Unit 1636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/5/10.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-11,13-15,17-76,80-108 and 111-119 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5-11,13-15,17-76 and 80-108 is/are allowed.
- 6) ☒ Claim(s) 111 is/are rejected.
- 7) ☒ Claim(s) 112-119 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1636

New grounds of rejection based on newly discovered art are presented below. The delay in the discovery and application of the new art is regretted.

Claims 112-119 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 1, 3, 5-11, 13-15, 17-76 and 80-108 are allowed.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 111 is rejected under 35 U.S.C. 102(e) as being anticipated by Shakesheff et al. (A, newly cited).

Claim 111 is drawn to a method of cell culturing, comprising: culturing one or more cells while restricting movement of said one or more cells such that each one of said one or more cells is in continuous contact with two opposing barrier surfaces and is mobile between said barrier surfaces.

Shakesheff et al. teaches, e.g., at paragraphs [0077] and [0078]: “[0077] In a second embodiment of the present invention the matrix is seeded with cells and the matrix is used as a

Art Unit: 1636

scaffold for tissue regeneration. [0078] In this embodiment the pore size is ideally of between 1 and 25 times the cell diameter to enable sufficient seeding of viable cells. The pore size may be reduced from 25 times the cell diameter to suit the application. Advantageously, the formation of the matrix in situ reduces the amount of damage to the cells during the seeding process since the cells are not physically inserted into the matrix, as in the prior art, rather the matrix is formed about the cells. In this manner, more of the cells used to seed the matrix remain viable for tissue regeneration.” Thus, cells were cultured in pores or openings in a structure, wherein the pores or holes were, among others, the same diameter as the cells, which means the cells inherently must have contacted the sides of the pore or hole on all sides. The opposing sides of such a pore or hole read upon opposing barrier surfaces. The cell in question must have had mobility to enter the matrix.

Claim 111 is rejected under 35 U.S.C. 102(e) as being anticipated by Lafferty et al. (B, newly cited).

Claim 111 is described above.

Lafferty et al. teaches, e.g., at column 21, second full paragraph: “A capillary (20) is depicted in FIG. 1 as having at least one wall (30) and a lumen (40) having an internal diameter of 200 μm and a length of 1 cm. One of skill in the art will recognize that modifications can be made to the volume or dimensions of the invention without departing from the spirit and scope of the present invention. For example, a capillary having an internal diameter of 200 μm and a length of 1 cm has a volume of about 0.3 μl . This volume can be modified by changing the length (e.g., increasing or decreasing the length) or the interior diameter (e.g., increasing or

Art Unit: 1636

decreasing the interior diameter) or both. The volume desired will depend upon a number of factors which can be empirically determined. Such factors include, for example, the number and size of the cell to be introduced into a capillary tube (20). A volume sufficient to introduce 1 or about 1-10 cells per capillary is desirable. The individual capillaries in the capillary array typically have an inner diameter (I.D.) of about 10-500 microns; and more preferably about 50-200 microns. In the embodiment depicted in FIG. 1 a volume of 0.3 μ l is sufficient to allow introduction of about 1 to 10 cells. The number of cells can be easily varied by dilution of the cell culture prior to wicking of The culture by the capillary tubes. It will be recognized that the outer wall (30) of capillary (20) can be one or more walls fused together. Similarly, the wall can define a lumen (40) that is cylindrical, square, hexagonal or any other geometric shape so long as the walls form a lumen for retention of a liquid or sample.” The inside diameter of the capillary is taught as, among others, 10 μ m, and at this diameter, eukaryotic cells typically would contact the walls of the capillary all around.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Ketter whose telephone number is 571-272-0770. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Low can be reached on 571-272-0951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1636

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSK

9 April 2010

/James S. Ketter/

Primary Examiner, Art Unit 1636